November 2, 2001

State of Idaho
Department of Environmental Quality

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the wells and aquifer characteristics.

This report, *Source Water Assessment for the Double L Inc. (a.k.a. Double L Manufacturing Inc.) in Idaho*, describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The Double L Inc. (Public Water System Number 6390036) drinking water system consists of one ground water source that serves approximately 65 persons (Double L Inc., October 2001). This well is located southwest of the Double L Inc. main building and is directly connected to the distribution system. During the assessment, several potential contaminant sources were identified within the zones of contribution for this system including septic tanks for several manufactured homes, diesel and unleaded fuel storage tanks located behind the facility's main building, Interstate 86, and Sunbeam Creek. There is also a RCRIS site regulated under the Resource Conservation and Recovery Act (RCRA). Possible contaminants associated with this RCRIS site are ignitable wastes such as paints, solvents and used oil (Idaho Department of Environmental Quality (IDEQ), September 2001). For this assessment, a review of laboratory tests for the Double L Inc. system was conducted using the Idaho Drinking Water Information Management System (DWIMS) and the SDWIS/STATE database. From June 1998 to present, no total coliform bacteria have been detected within the distribution system.

According to DWIMS and the SDWIS/STATE databases, no volatile organic chemicals (VOCs) or synthetic organic chemicals (SOCs) were detected in the water samples taken at the well. However, there have been several inorganic chemicals (IOCs) identified in the system. Between December 1998 and February 2001, water samples taken have detected arsenic, barium, fluoride, and nitrate. These chemicals were below each contaminant's maximum contaminant level (MCL). The nitrate results ranged from 2.50 mg/l to 2.77 mg/l and were well below the MCL of 10.0 mg/l.

The Southeastern District Health Department conducted a Sanitary Survey in 1998 for the Double L Inc. system. No system violations were stated within this survey. However, during the on-site enhanced inventory visit in July 2001, surface water was found at the wellhead. The source of the water was identified and repaired by the system (Double L Inc., September 2001). Susceptibility ratings for the Double L Inc. system were based upon available information relating to agricultural land use, soil drainage characteristics, and potential contaminant sources identified within the zones of contribution (IDEQ Source Water Assessment Plan, 1999, E-59). The final susceptibility ranking for Double L Inc. well is high for IOCs, VOCs, SOCs, and microbial contaminants.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For source water protection, Double L Inc. should continue their efforts in keeping the water system in compliance and free of contaminants that may affect the drinking water system. At the present time, the nitrate levels in the drinking water are below the MCL of 10.0 mg/l. If concentrations of nitrate or other contaminants approach or exceed the MCL level, the system should take appropriate measures to treat the water source. Treatments, such as reverse osmosis for IOCs, and disinfectant and filtration for microbial contaminants, should be investigated to remedy these problems. Continual monitoring of potential contaminant sources that currently exist within the zones of contribution is important to reduce the threat of contamination to the system's sole drinking water source. Any new sources that may be considered potential contaminant sources in the well's zones of contribution should also be investigated and monitored to prevent future contamination. Partnerships with state and local agencies, industrial and agricultural groups should be established and are critical to success. Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the Power County Soil Conservation District, and the Natural Resources Conservation Service.

SOURCE WATER ASSESSMENT FOR DOUBLE L INC.
POWER COUNTY, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings used to develop the assessment also is attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (IDEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess the over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the wells, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water system is not possible. **This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The IDEQ recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. IDEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The Double L Inc. is a non-community non-transient public drinking water system serving approximately 65 persons (Double L Inc., October 2001). The water system is located less than a one mile southeast of the City of American Falls (Figure 1) near Interstate 86. The system consists of one well to the southwest of Double L Inc.'s main building.

Although inorganic chemicals (arsenic, barium, fluoride, and nitrate) were identified in the public water system, the reported concentrations of these contaminants were below their MCL. Of the IOCs mentioned above, nitrate has been detected more than once in the system with concentrations ranging from 2.50 mg/l to 2.77 mg/l between December 1998 and February 2001. Although these nitrate levels are well below the MCL, the system should continue monitoring results to prevent the contaminant from approaching or exceeding the MCL. No VOCs or SOCs have been detected in the system.

Defining the Zones of Contribution – Delineation

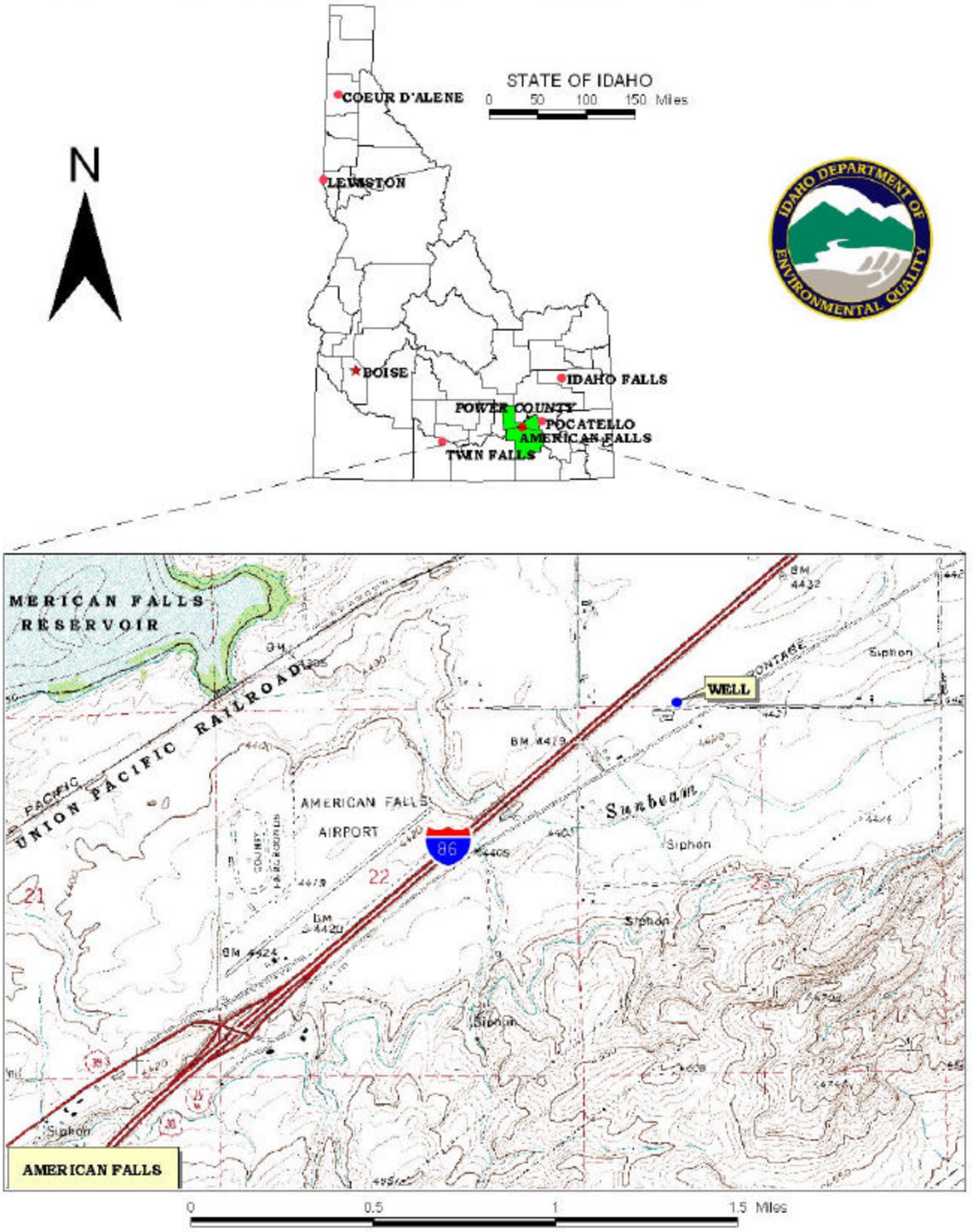
The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel (TOT) zones (zones indicating the number of years necessary for a particle of water to reach a pumping well) for water in the aquifer. Washington Group International Inc. (WGI) was contracted by IDEQ to define the public water system's zones of contribution. WGI used a refined computer model approved by the EPA in determining the 3-year (Zone 1B), 6-year (Zone 2), and 10-year (Zone 3) TOT for water associated with the Rockland Valley Hydrologic Province in the vicinity of the Double L Inc. The computer model used site-specific data, assimilated by WGI from a variety of sources including well logs, operator records, and hydrogeologic reports summarized below.

Double L Inc. is located in the northeast corner of the Rockland Valley Hydrologic Province. The Rockland Valley Hydrologic Province is approximately 221 square miles of the southeastern Idaho Snake River drainage and is within the more extensive Rockland Basin. The Rockland Basin was formed by basin-and-range extension with the long axis trending in a north-south direction. The elevations within the larger Rockland basin range from 4,200 feet above mean sea level (msl) at the northern end where Rock Creek converges with the Snake River and 8,700 feet msl at Deep Creek Peak found at the valley's eastern border in the Deep Creek Mountains. The Sublet Range bounds the valley to the west. The mountains bordering the basin are predominantly marine deposits that have undergone complex faulting. Sedimentary rocks eroded from the bounding mountains constitute the valley fill within the basin (WGI, 2001, p. 4-5).

The American Falls area is hydrologically bound by the Deep Creek and Bannock Mountain Ranges, the American Falls Reservoir, the Snake River, and Portneuf River. The ground water movement in this area is controlled by local geology. Impermeable units of silt, tuff, and fine-grained sand beneath the American Falls Reservoir impede ground water movement. The aquifer within the American Falls area consists of unconsolidated alluvium (deposits made by streams) with some sandstone. The direction of ground water flow moves west into American Falls Reservoir above the City of American Falls. Beyond the reservoir, the ground water moves southwest and discharges as seeps and springs.

Bordering the Rockland Basin, the main source of recharge is precipitation at the higher elevations. Closer to the American Falls area there is recharge by precipitation onto tuff outcrops that make up the hills to the southeast of American Falls (WGI, 2001, p. 5). For the Rockland Basin, the average accumulated precipitation is 17.3 inches per year. The average water-table gradient for the Rockland valley is approximately 25 feet per mile, and the slope is toward the mouth of Rock Creek (WGI, 2001, p. 4).

FIGURE 1. Geographic Location of Double L Inc.



The zones of contribution for the Double L Inc. well are mostly conical in shape constricting near the wellhead (Figure 2). The actual data used by Washington Group International in determining hydrogeological assessment and the delineation areas used for the source water assessment are available from IDEQ upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by IDEQ and from available databases.

It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used by the facility. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

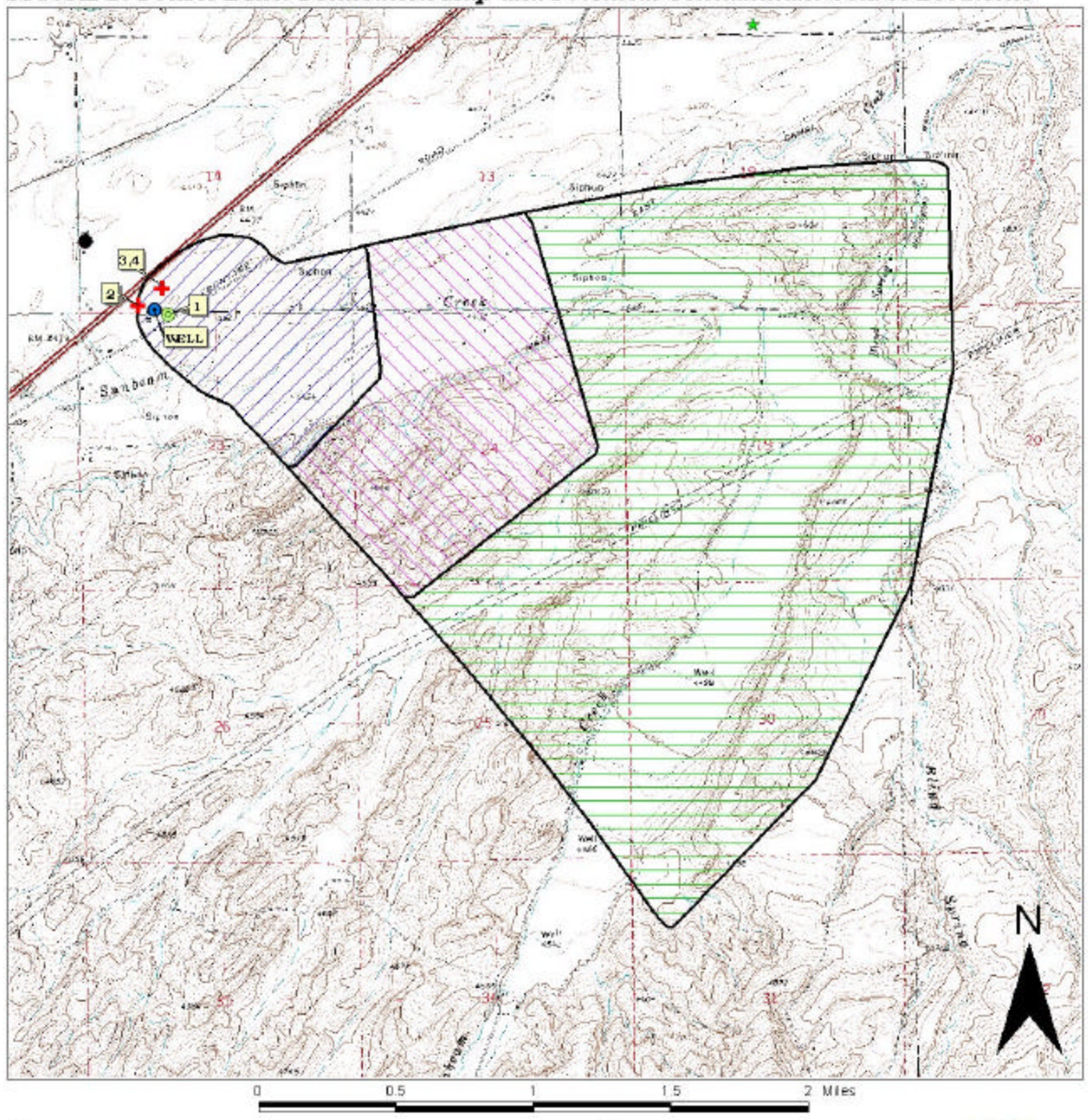
A two-phased contaminant inventory of the study area was conducted during the summer of 2001. The first phase involved identifying and documenting potential contaminant sources within Double L Inc. source water assessment area through the use of computer databases and Geographic Information System (GIS) maps developed by IDEQ. In July 2001, Double L Inc. and IDEQ then conducted the second phase or enhanced inventory to validate the sources identified in phase one and to identify additional potential sources of contamination in the delineated source water assessment area. At the time of the enhanced inventory, additional potential contaminant sources were found within the delineated source water area. (Table 1, Figure 2).

Table 1. Double L Inc. Potential Contaminant Inventory

Site #	Source Description	Source of Information	Potential Contaminants[1]
1	RCRIS[2] Site	Database Inventory	VOC, SOC
2	Septic Tanks	Enhanced Inventory	IOC, Microbes
3	Diesel Fuel Storage Tank	Enhanced Inventory	VOC, SOC
4	Unleaded Fuel Storage Tank	Enhanced Inventory	VOC, SOC
5	Interstate 86	Map Inventory	IOC, VOC, SOC, Microbes
6	Sunbeam Creek	Map Inventory	IOC, VOC, SOC, Microbes

[1]Potential Contaminants: IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical
[2]RCRIS = Site regulated under the Resource Conservation Recovery Act (RCRA)

FIGURE 2. Double L Inc. Delineation Map and Potential Contaminant Source Locations



LEGEND

Time of Travel Zones
- 1B (1 yr TOT)
- 2 (5 yr TOT)
- 3 (10 yr TOT)
- Wellhead
- Enhanced Inventory
- CERCLIS Site
- RCRIS Site
- Dairy
- LUST Site
- Closed UST Site
- Open UST Site
- Business Mailing List
- NPDES Site
- Mine
- AST
- Toxic Release Inventory
- SARA Title III Site (EPCRA)
- Recharge Point
- Injection Well
- Group1 Site
- Cyanide Site
- Landfill
- Wastewater Land App.Site

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

PWS# 6390036
WELL

Section 3. Susceptibility Analyses

The susceptibility of the wells to contamination was ranked as high, moderate, or low risk according to the following considerations hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

The hydrologic sensitivity of a well is dependent upon four factors. These factors are surface soil composition, the material in the vadose zone (between the land surface and the water table), the depth to first ground water, and the presence of a 50-foot thick fine-grained zone above the producing zone of the well. Slowly draining soils such as silt and clay typically are more protective of ground water than coarse-grained soils such as sand and gravel. Similarly, fine-grained sediments in the subsurface and a water depth of more than 300 feet protect the ground water from contamination.

The hydrologic sensitivity was rated high for the Double L Inc. well (Table 2). This is based upon moderate to well drained soil classes. Soils that have poor to moderate drainage characteristics have better filtration capabilities than faster draining soils. There was insufficient well log information available to evaluate the vadose zone composition, the first depth to ground water, and whether there is at least 50 feet of cumulative thickness of low permeability material that could reduce the downward movement of contaminants.

System Construction

The construction of the well directly affects the ability of the well to protect the aquifer from contaminants. System construction scores are reduced when information shows that potential contaminants will have a more difficult time reaching the intake of the well. Lower scores imply a system that can better protect the water. If the casing and annular seal both extend into a low permeability unit then the possibility of cross contamination from other aquifer layers is reduced and the system construction score goes down. If the highest production interval is greater than 100 feet below the water table, then the system is considered to have better buffering capacity. When information was adequate, a determination was made as to whether the casing and annular seals extend into low permeability units and whether current public water system (PWS) construction standards are met.

Double L Inc. system consists of one well that serves the agriculture equipment manufacturing business with approximately 65 employees (Double L Inc., October 2001) and several manufactured homes near the property. The well is located southwest of the main building and is confined by several wooden posts. The system construction for the well was rated high (Table 2). IDEQ was unable to locate well log information to provide system construction data for this assessment. According to the 1998 Sanitary Survey, the wellhead and surface seal were properly maintained. During the enhanced inventory conducted by IDEQ in July 2001, water was found on the ground near the wellhead.

On September 5, 2001, Double L Inc. contacted the IDEQ office to indicate that the source causing the surface water near the wellhead was found and repaired. The Double L Inc. well is located outside of a 100-year floodplain decreasing the chance of contaminants being drawn into the drinking water source by surface water flooding.

Because well log information was unavailable, IDEQ could not assess the highest water production zones for the well. It should be noted that water drawn from deeper levels of the aquifer could provide a buffer from contaminants. It is unknown whether the well extends into a low permeable unit (i.e. clay). When the well casing extends into low permeable material, it may decrease the well's susceptibility to laterally migrating contamination. Also, the well casing thickness is unknown, therefore, the well does not meet the recommended IDWR standards for a public water system (PWS) of 0.375 inches for 12-inch or greater diameter casing as listed in the Recommended Standards for Water Works (1997). A thicker casing may prolong the life of the well. The IDWR Well Construction Standards Rules (1993) require all PWSs to follow IDEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the Recommended Standards for Water Works (1997) during construction. Under current standards, all PWS wells are required to have a 50-foot buffer around the wellhead.

Potential Contaminant Sources and Land Use

The Double L Inc. well was rated high for IOCs (i.e., nitrates), high for VOCs (i.e., petroleum-related products), high for SOCs (i.e. pesticides), and moderate for microbial contaminants (i.e., fecal coliform). A list of potential contaminants is provided with this assessment (Table 1). The contaminants identified if released could adversely impact the system's sole drinking water source. Septic tanks may introduce nitrates or bacteria into the system. Transportation corridors likely have potential contaminants such as herbicides for weed control on the right-of-way, road salts, anti-caking additives, or automotive wastes. Creeks or surface water sources allow direct infiltration of any potential contaminant into the ground water. On-site fuel storage tanks contain VOCs and SOCs that may leach into the ground. A RCRIS site within the three-year time of travel zone may have potential contaminants of VOCs (i.e. ignitable waste) and SOCs (i.e. paints, solvents) that could migrate down into ground water (IDEQ, September 2001). When agriculture is the predominant land use in the area, the likelihood that agricultural wastewater could infiltrate the ground water system is increased. Refer to Figure 2 for the well location and potential contaminants in relation to delineated time of travel zones. The dominant land use near Double L Inc. area is agricultural with interspersed residential homes. Agricultural land is counted as a source of leachable contaminants. The points assigned to agricultural lands are based on the percentage of agricultural land.

Final Susceptibility Ranking

A detection above the drinking water standard MCL including any detection of a VOC or SOC will automatically give a high susceptibility rating for the final well ranking despite the land use because a pathway for contamination already exists. Hydrologic sensitivity and system construction scores are heavily weighted in the final scores. Having multiple potential contaminant sources in the 0 to 3-year time of travel zone (Zone 1B) and a large percentage of agricultural land contribute greatly to the overall ranking. In terms of total susceptibility, the Double L Inc well was rated high for IOC, VOC, SOC, and microbial contamination (Table 2). The high rating reflects the system construction, hydrologic sensitivity, potential contaminants inventory and land use within the delineated source water assessment areas.

Table 2. Summary of Double L Inc. Susceptibility Evaluation

	Susceptibility Scores[1]									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	**Final Susceptibility Ranking[2]**			
Well		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Well	H	H	H	H	M	H	H	H	H	H

[1] Susceptibility Scores: H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility
[2] IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Susceptibility Summary

Arsenic, barium, fluoride, and nitrate represent the water chemistry history for the Double L Inc. public water system, although the reported concentrations of these chemicals in the drinking water were well below the MCL for each chemical. The IOCs mentioned above with the exception of nitrate were only detected in the system once. Although, the nitrate concentrations are well below the MCL of 10.0 mg/l, there should be continued monitoring if the concentration increases. In the history of the Double L Inc. public water system there have been no detections of VOCs or SOCs.

The county level agriculture-chemical use is considered high in this area due a significant amount of agricultural land. Although the agriculture uses throughout the county may differ depending on the area of concern, it is useful as a tool in determining the overall chemical usage, such as pesticides, and how it may impact ground water through infiltration and surface water runoff. It should be noted that there is potential for future contamination based upon agricultural practices. Working with the local agricultural constituents to learn these practices will help the system devise protection measures for their drinking water source.

In addition, several potential sources of contamination were identified within the delineated time of travel zones for the Double L Inc. well (Figure 2, Table 1). All potential contaminants including new contaminants should be documented and monitored by the system.

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

A source water protection program is tailored to the particular source water area. A public water system with a fully developed source water protection program will incorporate many strategies. For the Double L Inc. public water system, source water protection activities should focus on implementation of practices aimed at protecting the area near the well and continue maintaining the overall integrity of the water system. Possible protection measures that can be implemented include fencing or concrete posts around the wellhead to provide a buffer and to increase awareness of the well's location. Other protection measures would be to educate employees of proper containment of chemicals, and provide secondary containment for new on-site fuel or chemical storage tanks. If contaminants are detected in the system at or above their MCL, Double L Inc. should take appropriate measures to treat the water source. Treatments, such as a disinfectant and filtration for microbials, and reverse osmosis for IOCs, should be investigated to remedy these problems.

The Double L Inc. system should continue to keep open dialogue with local residents and businesses within the well's zones of contribution and document potential IOCs, VOCs, SOCs, or microbial contaminants. Any spills from the multiple potential contaminant sources in the delineated capture zones should be monitored carefully to prevent contaminants from infiltrating the ground water. Source water protection goes well beyond the jurisdiction of Double L Inc. system. Establishing partnerships with local and state agencies, commercial, industrial and agricultural groups are important to protect the system's sole drinking water source. Double L Inc. currently has two certified operators responsible for water quality monitoring (Double L Inc., October 2001). These individuals can take an active role in source water protection by educating Double L Inc. employees about their drinking water and identification of potential contaminants. Having more people aware of the drinking water will assist the system in its monitoring efforts. Continued vigilance in keeping the wells protected from surface flooding can also keep the potential for contamination reduced. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the Power County Soil Conservation District, and the Natural Resources Conservation Service.

Assistance

Public water supplies and others may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Pocatello Regional IDEQ Office (208) 236-6160

State IDEQ Office (208) 373-0502

Website: http://www.deq.state.id.us

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper, Idaho Rural Water Association, at 208-343-7001 for assistance with drinking water protection strategies.

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as "Superfund" is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

References

Double L Inc., September 5, 2001. Correspondence between Mike Nelson, Vice President of Operations for Double L Inc. and DEQ about surface water found near wellhead.

Double L Inc., October 24, 2001. Correspondence between Mark Evans, Public Water System Operator for Double L Inc. and DEQ regarding modifications to Source Water Assessment Draft.

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Washington Group International, Inc, March 2001. Source Area Delineation Report Rockland Valley Hydrologic Province.

Attachment A

DOUBLE L INC.

Susceptibility Analysis
Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

≥ 13 High Susceptibility

1. System Construction		SCORE
Drill Date	Unknown	
Driller Log Available	NO	
Sanitary Survey (if yes, indicate date of last survey)	YES	1998
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	NO	1
Casing and annular seal extend to low permeability unit	NO	2
Highest production 100 feet below static water level	NO	1
Well located outside the 100 year flood plain	YES	0
Total System Construction Score		5

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	NO	2
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2
Total Hydrologic Score		6

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	YES	0	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	4	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	3	4	4	3
(Score = # Sources X 2) 8 Points Maximum		6	8	8	6
Sources of Class II or III leacheable contaminants or	YES	4	3	2	
4 Points Maximum		4	3	2	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Greater Than 50% Irrigated Agricultural Land	4	4	4	4
Total Potential Contaminant Source / Land Use Score - Zone 1B		14	15	14	10
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	0	0	
Land Use Zone II	25 to 50% Irrigated Agricultural Land	1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		4	3	3	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		1	1	1	0
Cumulative Potential Contaminant / Land Use Score		21	21	22	12
4. Final Susceptibility Source Score		15	15	15	15
5. Final Well Ranking		High	High	High	High